

A New Species of the *Phasis thero* (L.) Group (Lepidoptera: Lycaenidae) from the Roggeveld Escarpment

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This insect was discovered by Mr. Ernest Pringle in a valley near Sutherland, Cape Province, on 19th December, 1975, and more specimens were found by him when re-visiting the same spot almost exactly a year later. It can be separated at a glance from any other species of its group by its remarkably distinctive hindwing underside. The habitat is about 5,000 ft. above sea level.

Phasis pringlei spec. nov.

In this insect the forewings are inclined to be deeper in relation to their length than in *Ph. thero* (L.), and the distal-margin less undulating (with some approach to that of *Ph. clavum* Murray), while the hindwings are more rounded at their upper angle. The anal-angular lobe is distinctly less prominent than in *thero*, but both "tails" (at the ends of veins 1b and 2) are present as in this species. In occasional or even a fair proportion of males the orange-red spots of the upper-side of the forewing are partly or mostly much reduced in size, in much the same manner as occurs in so many examples of *clavum*.

MALE (Upperside):

Forewing. Orange-red spotting reduced, in comparison with males of *thero* in which it is most fully developed, but (as in the holotype of *pringlei*) not infrequently like that of some specimens of *thero* in which its development is relatively restricted.

Hindwing. The orange-red submarginal spotting either developed to a variable degree (sometimes up to vein 4) or entirely absent.

Cilia in all wings tend to be more uniformly light throughout than in *thero*, but without loss of some definitely dark spacing.

Underside:

Forewing. The extensive orange-red area tends to be lighter than in *thero*; postdiscal series of black spots less out of line at vein 4 than is usually the case in the latter species. The submarginal area at least partly of a distinctly more fawn tone than in *thero* in its normal form.

Hindwing. A large area mainly below a dark strip in and beyond cell, very distinctly fawn-coloured, and at least the greater part of the wing lacking the widespread, noticeably grey tone of that of *thero*. The light markings with a metallic sheen (and which have a more golden tone than in *thero*) are reduced in size to a remarkable degree and many or most of them are frequently absent, with only their dark edging remaining. The development of the remaining part of the

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"key" marking beyond the end of the cell varies in individual examples, as does that of other light markings, but in all specimens seen no more than its basal end has been present. Distal-marginal area grey or bluish-grey to a depth of at least 1.5 mm., and inner-marginal area more broadly so.

Cilia in all wings, though somewhat variegated, not differing greatly in colour from adjoining wing-surface.

Length of forewing: 18.5-20.5 mm. (19.25 mm. in holotype).

FEMALE (Upperside):

Essentially as in male. Orange-red marking of forewing more prominent and more fully developed towards apical region, in some specimens (and as in the allotype), than in male, but in individual females also decidedly reduced.

Cilia sometimes (as in some males), with light coloration markedly predominant.

Underside. As in male, generally, but the fawn coloration more widespread, and striking, in all wings. In the allotype the light "key" marking is comparatively well developed (but decidedly less so than in *thero*), as is a light streak immediately above the cell.

Length of forewing: 21.25-22.25 mm. (the latter measurement that of allotype).

♂ Holotype, WESTERN CAPE PROVINCE: Sutherland, 2.xii.1976 (E. L. Pringle); British Museum Reg. No. Rh.18674.

♀ Allotype, W. CAPE PROVINCE: data as for holotype, 1.xii.1976 (E.L.P.); British Museum Reg. No. Rh.18675.

Paratypes in author's coll.: as holotype, 19.xii.1975, one ♂, one ♀; 1.xii.1976, two ♂♂, one ♀ (E.L.P.).

Paratypes in coll. E. L. and V. Pringle: as holotype, 19.xii.1975, five ♂♂, one ♀; 1.xii.1976, nine ♂♂, eleven ♀♀ (E.L.P.). A pair of these paratypes will be presented to the Transvaal Museum.

In a careful comparison of the male genitalia with those of *Ph. thero* no material differences have been observed, but in the present group such negative results do not indicate that the taxa concerned are not specifically distinct. All other factors that have been taken into account, do, in the writer's view, provide convincing proof of *Ph. pringlei* representing an entirely separate species. It is of interest, and significant from this point of view, that Dr. J. Kaplan should have caught, apparently in the neighbourhood of Sutherland, two rather small, dark specimens, very different from *pringlei*, and which appear to represent a quite striking race of *thero* itself. *Ph. clavum* is widespread in this district, having been found there by Dr. Kaplan as well as by the writer, and possibly others, too.

Mr. Pringle has made the following remark concerning the present species, in a letter dated 4th December, 1976: "We [himself and his father] have, as you know, just returned from a brief trip to Sutherland and Namaqualand. At Sutherland we caught some more nice specimens of the proposed *Phasis pringlei*, and succeeded in finding a second colony of

the species up a gully in Verlaten Kloof (the pass leading to Sutherland)." It was also ascertained that the butterfly was closely associated with a species of *Melianthus* (Melianthaceae). This is doubtless the larval foodplant, in view of *M. major* L. being one of the principal foodplants of *Ph. thero* (L.).

Specimens which represent the holotype and allotype, and two paratypes, of this butterfly are being figured in colour in Pennington's *Butterflies of Southern Africa* (1978).

Current Literature

Insects and the Life of Man. Collected Essays on Pure Science and Applied Biology by Sir Vincent Wigglesworth, C.B.E., M.D., F.R.S. Chapman & Hall. Science Paperbacks, pp. 217. £3.25.

This collection of essays and lectures spans the forty years up to 1971. Many of the papers have only an historical interest today, though it is interesting to observe how early doubts on the value of insecticides have been justified and how there has been a return to the control of pests by applying ecological methods.

The main theme behind most of the papers is the need to strike the right balance between the Pure and Applied aspects of entomology. Sir Vincent pays tribute to the role of the amateur, not only in building up the systematic entomology of this country, but also in laying the foundations of many branches of the science. He shows that the role of the pure scientist is often to provide a rational basis for the practical application to problems which have been long established on empirical grounds. At the same time he stresses the need for continued support for Pure Science which should be free of compulsion to show an immediate application.

Another aspect of the book is to stress the value of insects as a medium for physiological studies.

Also included are a fascinating study of the versatility of insect epidermal cells; an account of the contribution to insect physiology made by Sir John Lubbock; an amusing sketch of Wordsworth's view of science; and a final essay entitled "The Religion of Science", in which it is suggested that a scientist's entire system of thought is based on a faith that natural laws must exist. — E.H.W.

Also received:— **The Developmental Biology of Plants and Animals.** Edited by C. F. Graham and P. F. Wareing, D.Sc., F.R.S. Blackwell Scientific Publications. £7.75. This brings together for the first time an up-to-date account of the embryology of plants and animals with contributions from other specialists in their particular fields. Well illustrated and set out, it seeks to cut across traditional divisions into botany, zoology and the allied sciences, and to integrate their different approaches. — E.H.W.